

## **REMARKS**

Claims 1, 2, 3, 10, and 15 are presently under consideration. Claims 1-3 are currently amended. Claim 18 has been withdrawn.

### **I. Figures 5 and 6 are objected to under 37 C.F.R. § 1.84(i)**

The Examiner stated, “The drawings are objected to, specifically the split views of Figures 5A-6B, which are partially in section and partially in plan...These superposed [*sic*] views are unduly difficult to understand... .”

Applicant respectfully submits that the views illustrated are provided to show aspects of the invention that would not otherwise be readily seen and that such views are not complicated. Specifically, Figures 5A and 6A show the top down view of the cold and hot water isolation valves, respectively. Figures 5B and 6B show the valves of Figures 5A and 6A, with each of the respective valves rotated 45 degrees from the plane of the figure towards the viewer, thereby providing an end-on view of the drain ports 506 and 608, respectively. Applicant submits that this is evident from both the “Brief Description of the Drawings” section and the “Detailed Description of the Invention” section.

The partial views are required to show internal portions of the isolation valve that would not otherwise be visible. In Figure 5A the partial views function to clarify how the internal components are situated within the isolation valve, for example, the ball valve 509 and the drain valve 501, as well as the relative positioning of the four valve seats 522, 523, 527, and 528. Similarly, this also holds true for the information conveyed in Figure 6A. This type of structural information in the two figures would be hidden in a purely plan view, and unduly difficult to interpret in context in a purely cross sectional view. Applicant submits that the current drawings are the most effective way to convey the details of the current invention to one skilled in the art. Furthermore, such partial view drawings are commonplace in brochures, specification sheets and utility applications issued in this, and other, art areas.

The Examiner also stated that “...A complete cross sectional view, showing the flow path(s) through the valve would be most helpful. The drawings must show every feature of the invention...in particular the main section and valve, a stem and a seat valve, and four seats... .”

With regard to the “flow path(s),” Applicant submits that these are clearly indicated in Figure 5A as elements 503 and 505, which are clearly described on page 4, lines 16-17 of the specification: “...a cold water flow channel 503 and a cold water drain channel 505...” Similarly, these are clearly indicated in Figure 6A as elements 603 and 605, which are clearly described on page 5, lines 31-32 of the specification: “a hot water flow channel 603 and a cold water drain channel 605...”

With regard to the Examiner’s objection to the “main section and valve,” Applicant notes that claim 1 has been amended to refer to a “drain valve section” instead of a “main section” for reasons of clarity (see section V of this response below). Applicant submits that it is clear that the “drain valve section” is the section that communicates with the drain port (506 in Figure 5A and 608 in Figure 6A), and may house the drain valve as depicted for the illustrative embodiment shown in Figure 5A (element 501) and Figure 6A (element 601).

With regard to the Examiner’s objection to the “four seats,” Applicant respectfully points out that these are clearly indicated in Figure 5A as elements 522, 523, 527, and 528. The hot water counterparts of these valve seats are similarly indicated in Figure 6A as elements 622, 623, 627, and 628.

With regard to the Examiner’s objection to “a stem and a seat valve,” Applicant submits that these are referred to in the specification as an alternative embodiment of the drain valve (501 or 601) that is not specifically depicted in the figures (see page 4, lines 14-15). Applicant respectfully contends that one of ordinary skill in the art would know how to substitute a ball valve with a “stem and seat valve.”

Applicant respectfully requests that this objection be withdrawn.

## **II. Restriction/Election requirement under 35 U.S.C. § 121**

Applicant elects claims 1-3, 10, and 15 without traverse. Claim 18 has been withdrawn.

## **III. Claims 2-3, and 15 are rejected under 35 U.S.C. § 112, paragraph 1**

The Examiner has rejected claims 2-3, and 15 under 35 U.S.C. § 112, paragraph 1 as failing to comply with the enablement requirement. The Examiner stated that “[t]here is no

disclosure of a valve which can control fluid flow as recited in claim 1 and also having a main section separate from and adjacent the ball section (emphasis added).”

Applicant has amended claim 2 to delete the phrase “a main section disposed separate from and adjacent to said ball section; and a drain port communicating with said main section.”

This amendment is believed to overcome the Examiner’s rejection of claim 2, as well as the rejection of the dependent claims 3 and 15.

#### **IV. Claims 2-3, and 15 are rejected under 35 U.S.C. § 112, paragraph 2**

The Examiner has rejected claims 2-3, and 15 under 35 U.S.C. § 112, paragraph 2 as being indefinite. The Examiner stated “Claim 2 recites the limitation “said ball” in line 6. There is insufficient antecedent basis for this limitation in the claim (emphasis added).”

Applicant thanks the Examiner for noticing this error. Applicant has amended claim 2, line 6, to properly recite “a ball” instead of “said ball.” This amendment of claim 2 is believed to overcome the Examiner’s rejection of claim 2, as well as the rejection of the dependent claims 3 and 15.

#### **V. Claims 1-2 and 15 are rejected under 35 U.S.C. § 102 (b)**

The Examiner rejected claims 1-2 and 15 under 35 U.S.C. § 102 (b) as being unpatentable over U.S. Patent No. 4,479,459 to Jack Piper (“Piper”). Applicant traverses the rejection.

The Examiner stated that “Pipe 60 is read as the main section. It is believed that the pertinence of the reference is readily apparent.”

In contrast to the Examiner’s assertion, Piper does not teach “an isolation valve” that contains “a drain valve section disposed separate from and adjacent to said valve portion, said drain valve section communicating with said fluid drain port in a controllable manner” as particularly claimed in the instant amended claims. Rather, Piper teaches a “blow down or blow off valve mechanism for the low water cut off and/or water column of the equalizing piping network of a steam boiler (abstract, first sentence)” in which there “is a drain or blow down pipe 60 extending downwardly from the body of the valve mechanism 50. The drain pipe at its bottom end is connected to a drain to allow drainage...(col 3, lines 43-46).”

Claim 1 of the current application, as amended, recites:

“A fluid isolation valve comprising:

a valve body, said valve body having a first fluid flow port, a second fluid flow port and a fluid drain port, wherein said valve body defines a fluid flow channel, a drain flow channel and a valve portion, said valve portion being disposed to be communicated with said first fluid flow port, said second fluid flow port and said fluid drain port;

a flow diversion device disposed within said valve portion, said flow diversion device being configurable between a first configuration and a second configuration, such that when said flow diversion device is in said first configuration said first fluid flow port is communicated with said second fluid flow port and when said flow diversion device is in said second configuration said first fluid flow port is communicated with said fluid drain port; and

a drain valve section disposed separate from and adjacent to said valve portion, said drain valve section communicating with said fluid drain port in a controllable manner. (emphasis added)”

Unlike the instant amended claim 1, the “blow down valve mechanism” of Piper does not have a “drain valve section communicating with said fluid drain port in a controllable manner.” Consequently, Applicant submits that the Examiner has failed to establish prima facie anticipation, which “requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.” Lindemann Maschinenfabrik GmbH v. American Hois & Derrick Co., 730 F.2d 1452 (Fed. Cir. 1984).

To maintain continuity with the amended claim 1, Applicant has also amended claim 3 to refer to “said drain valve section,” which clarifies the position of the “drain port valve” and establishes proper antecedent basis. Applicant respectfully requests that the rejection of claims 2, 3, and 15 be withdrawn.

#### **VI. Claim 1-3 are rejected under 35 U.S.C. § 102 (b)**

The Examiner rejected claims 1-3 under 35 U.S.C. § 102 (b) as being unpatentable over U.S. Patent No. 4,089,345 to H. A. Eberhardt (“Eberhardt”). Applicant traverses the rejection.

The Examiner stated, “It is believed that the pertinence of the reference is readily apparent. Drain valve 86 is read as a stem and seat valve.”

In contrast to the Examiner’s assertion, Eberhardt does not teach or suggest “an isolation valve” that contains “a drain valve section disposed separate from and adjacent to said valve

portion, said drain valve section communicating with said fluid drain port in a controllable manner” as particularly claimed in the instant amended claim 1. Eberhardt teaches a “...discharge valve for controlling the discharge flow of water from the delivery end of a fire pump...” in which the discharge valve contains a “valve member 26 [that is] rotatable between open and closed positions by a valve handle 42...” The discharge valve contains a single “cylindrical internal flow passage 32...”

Claim 1 of the current application, as amended, recites:

“A fluid isolation valve comprising:

a valve body, said valve body having a first fluid flow port, a second fluid flow port and a fluid drain port, wherein said valve body defines a fluid flow channel, a drain flow channel and a valve portion, said valve portion being disposed to be communicated with said first fluid flow port, said second fluid flow port and said fluid drain port;

a flow diversion device disposed within said valve portion, said flow diversion device being configurable between a first configuration and a second configuration, such that when said flow diversion device is in said first configuration said first fluid flow port is communicated with said second fluid flow port and when said flow diversion device is in said second configuration said first fluid flow port is communicated with said fluid drain port; and

a drain valve section disposed separate from and adjacent to said valve portion, said drain valve section communicating with said fluid drain port in a controllable manner. (emphasis added)”

In contrast to claim 1, Eberhardt does not teach or suggest a “fluid isolation valve” with a “flow diversion device being configurable between a first configuration and a second configuration, such that when said flow diversion device is in said first configuration said first fluid flow port is communicated with said second fluid flow port and when said flow diversion device is in said second configuration said first fluid flow port is communicated with said fluid drain port” and a “drain valve section” that can communicate with a “drain port in a controllable manner.” On the contrary, Eberhardt teaches a valve with a single “cylindrical internal flow passage 32... .” Additionally, Eberhardt has no “fluid drain port” and no “drain valve section” that can communicate with a fluid “drain port in a controllable manner” as disclosed and claimed in the current invention. Moreover, Eberhardt teaches away from the current invention as it has no draining functions whatsoever, and such draining functions would be contrary to its primary

purpose as a “discharge valve” that functions to “deliver water at high pressure to fire hose lines (col 1, line 8).”

Applicant submits that the Examiner has failed to establish prima facie anticipation, which “requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.” Id. Applicant respectfully requests that the rejection of claims 1-3 be withdrawn.

**VII. Claim 10 is rejected under 35 U.S.C. § 103 (a)**

The Examiner has rejected claim 10 under 35 U.S.C. § 103 (a) as being unpatentable over Piper. As described in section V above, claim 1 has been amended to include “a drain valve section disposed separate from and adjacent to said valve portion, said drain valve section communicating with said fluid drain port in a controllable manner.” As a result of this amendment, claim 1 is now believed to be in condition for allowance. In view of this, the current rejection of claim 10, which depends from claim 1, is believed to be moot.

**CONCLUSION**

For at least the reasons set forth above, reconsideration and allowance of this application are believed to be in order, and such action is hereby solicited. If any points remain an issue which the Examiner feels may be best resolved through a telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below. The Examiner is invited and encouraged to telephone the undersigned with any concerns in furtherance of the prosecution of the present application.

Please charge any deficiency as well as any other fee(s) which may become due at any time during the pendency of this application, or credit any overpayment of such fee(s) to Deposit Account No. 50-2896.

Respectfully submitted,

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Dated:

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